SPASSKAYA, R.I.; KAZARNOVSKIY, S.N.

Continuous method of producing guanidine from urea. Khim.prom. no.7:488-491 Jl '63. (MIRA 16:11)

ANTIPINA, I. V.; KAZARNOVSKIY, S. N.; Prinimala uchastiye: LEBEDEVA V. V.

Oxidation of cyclohexylamine by hydrogen peroxide to cyclohexanone oxime. Khim prom no. 3:165-170 Mr '64. (MIRA 17:5)

MALKINA, N.I.; KAZARNOVSKIY, S.N.

Synthesis of cyanuric acid from urea. Zhur.prikl.khim. 37 no. 5:1158-1160 My '64. (MIRA 17:7)

1. Gor'kovskiy politekhnicheskiy institut imeni A.A.Zhdanova.

L 10407-66 EWT(m)/EWP(w)/EWP(j)/T/EWP(t)/EWP(b) JD/WB/DJ/WE/RM
ACC NR: AM5022503 Monograph UR/

Kolotukhin, Ivan Nikiforovich; Kuznetsov, Vasiliy Georgiyevich; Kazarnovskiy, Semen Naumovich; Tsaregradskiy, Vladimir Alekseyevich

Lubricating and protective materials (Smazochnyye i zashchitnyye materialy) 3d ed., rev. and enl. Moscow, Izd-vo "Transport," 1965. 171 p. illus., biblio., 8000 copies printed.

TOPIC TAGS: lubricant, lubricant component, lubricant property, lubricating oil, grease, lubrication, paint, lacquer, detergent, railway rolling stock, protective coating, corrosion protection

PURPOSE AND COVERAGE: This monograph presents the basic properties, test and preparative methods, and also applications for lubricant and protective paints and lacquers required in the railroad industry. Compared with the second edition, this edition provides additional information on synthetic oils, greases, new synthetic polymeric paints and lacquers, and also detergents and polishing compositions. The monograph was approved by the State Administration for Educational Institutions of the Ministry of Transport as a textbook for rail transport technical schools and can be used by a wide range of workers who are connected with painting and lubrication of rolling stock.

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UDC: 625.23/.24002.4:[621.892+66]

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ACC NR: AM5022503

SUB CODE: FP, MT/ SUBM DATE: 25Mar65/ ORIG REF: 033

6C

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KOLOTUKHIN, Ivan Nikiforovich; KUZNETSOV, Vasiliy Georgiyevich; KAZARNOVSKIY, Semen Naumovich; TSAREGRADSKIY, Vladimir Alekseyevich; SARANTSEV, Yu.S., red.

[Lubricating and protective materials] Smazochnye i zashchitnye materialy. Izd.3., perer. i dop. [By] I.N.Kolotukhin, i dr. Moskva, Transport, 1965. 171 p. (MIRA 18:4)

KAZARNOVSKIY, V.

[Analysis of the financial administration of industrial enterprises]
Analiz khoziaistvennoi deiatel'nosti promyshlennogo predpriiatiia.
Moskva, Gosfinizdat, 1954. 133 p. (MLRA 7:12)
(Industrial management)

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 4, p 184 (USSR) 15-57-4-5393

AUTHORS: Borisova, E. A., Kazarnovskiy, V. D.

TITLE: Laboratory Investigations on the Treatment of Saline Soil by Liquid Bitumen With Preliminary Flushing by Water (Laboratornyye issledovaniya po obrabotke zasolennykh gruntov zhidkim bitumom s predvaritel'noy promyvkoy vodoy)

PERIODICAL: Tr. Mosk. avtomob.-dor. in-ta, 1956, Nr 18, pp 241-248.

ABSTRACT: The material used was chloride-sulfate saline soil cut from a section of rock in the Andizhanskaya Oblast', Uz SSR. The data of the investigations are given. It was discovered that when the chloride and sulfate content of soil exceeds one percent, the soil is unsuitable for treatment with organic binding material in highway construction and demands preliminary flushing by water. The authors outline the relationship between number of flushings of the soil by water and the quantity

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of indroducible bitumen. They show the possibility of lowering the quantity of binding substance by increasing the number of flushings, and, on the other hand, lowering the number of flushings by somewhat increasing the expenditure of binding substance, depending on the economy of the construction. It is noted that flushing of the soil has not yet been applied in highway-construction practice. However, flushing the soil before treating with liquid bitumen may prove to be much more profitable than replacing the saline soil. The results obtained from testing samples by composite flushing of soil and use of liquid bitumen (bulk weight, water saturation, swelling, durability of dry and capillary-moistened samples) are in agreement, according to the degree of fitness of saline soils, with the classification of the "Technical rules on the construction of a roadbed and highway base in the desicated zone on saline soils." Flushing of the soil (2 to 3 times) is proposed for the roadbed immediately next to the highway. For flooding sections of the earthen roadbed, it is necessary to construct retaining borders of planking or of low soil ridges.

Card 2/2

Ye. G. B.

KAZARNOVSKIY, V.D., inzh.; KAZARNOVSKAYA, E.A., inzh.

Washing salty soils for road construction. Trudy MADI no.22: 170-175 '58. (MIRA 12:4)
(Soil physics) (Road construction)

KAZARNOVSKIY, Vladimir Davydovich; GANYUSHIN, A.I., red.; MAL'KOVA, N.V., tekhn. red.

[Calculation of the shear strength of soil in the designing of a road] Uchet soprotivliaemosti grantov sdvigu pri proektirovanii dorozhnoi konstruktsii. Moskva, Avtotransizdat, 1962. 34 p. (MIRA 15:5)

(Soil mechanics) (Roads—Designing)

KAZARNOVSKIY, V.D., inzh.

Degree of soil stabilization and the shear resistance of ground.
Avt.dor. 24 no.12:15-17 D '61. (MIRA 14:12)
(Soil stabilization)

MASLOV, N.N., prof., doktor tekhn.nuak, zasluzhennyy deyatel' nauki i tekhniki RSFSR; KAZARNOVSKIY, V.D., inzh.

Using the density-humidity method in determining soil resistance. Avt.dor. 25 no.12:19-21 D '62. (MIRA 16:2)
(Soil mechanics)

FUZAKOV, N.A., doktor tekhn. nauk; KHARKHUTA, N.Ya., doktor tekhn. nauk; KOTYLEV, Yu.L., kand. tekhn. nauk; VEYTSMAN, M.I., kand. tekhn. nauk; MITASOV, I.V., inzh.; LEVITSKIY, Ye.F., inzh.; RUMANOV, A.Z., inzh.; Prinimali uchastiye: KAZARNOVSKIY, V.D., kand. tekhn. nauk; DENISOV, Ye.M., inzh.; TOPOL'NITSKAYA, L.F., red.

[Instruction for building earth automobile roadbeds] Instruktsiia po sooruzheniiu zemlianogo polotna avtomobil'nykh dorog (VSN 97-63). Moskva, Transport, 1964. 238 p. (MIRA 17:11)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy proizvodstvennyy komitet po transportnomu stroitel'stvu.

KAZARNOVSKIY, Ya. S.

"The Explosive Conversion of Methane, Part 1", Khimicheskaya Pererabotka Neftyanykh Uglevodorodov (Chemical Conversion of Petroleum Hydrocarbons), Academy of Sciences USSR, Moscow, 1956, pp 133-141

Sum, 1429

KAZARNOVSKIY, Ya. S.

"The Explosive Conversion of Methane, part 2", Khimicheskaya Pererabotka Neftyanykh Uglevodorodov (Chemical Conversion of Petroleum Hydrocarbons), Academy of Sciences USSR, Moscow, 1956, pp 142-152

S4M, 1424

KAZARNOVSKIY, Ya. S.

"The Explosive Conversion of Methane; Part 3," Khimicheskaya Pererabotka Neftyanykh Uglevodorodov (Chemical Conversion of Petroleum Hydrocarbons), Academy of Sciences USSR, Moscow, 1956, pp 153-166

Sum 1139

ca

2

PROCESSES AND PROPERTIES INDEX

Calculation of the composition of the gas phase above a binary solution. I. R. Krichevskii and Ya. S. Kazarnovskii. *J. Phys. Chem.* (U. S. S. R.) 5, 1222-9(1934); cf. *C. A.* 29, 1704[8].—By means of a numerical integration of the Gibbs-Duhem equation in the form $dx_1 = x_1(1 - x_1)/P(x_1 - N)dP$ by the method of Runge the gas-phase compn. is calcd. as a function of the molar compn. of the liquid and the resp. vapor pressures. At 35.17° in Me_2CO-CS_2 solns. some values of the mol. fraction of Me_2CO in the liquid, the mol. fraction calcd. and that found in the gaseous state were 0.9376, 0.734, 0.749; 0.7185, 0.4[illegible], 0.488; 0.5500, 0.385, 0.388; 0.2702, 0.322, 0.317; 0.0308, 0.116, 0.110. By applying the Lewis-Randall concept of fugacity and the Kaeez and Clark value (*C. A.* 26, 3172) for polymerization of HOAc, the following (selected) mol. fractions of HOAc in HOAc-PhMe solns. at 80.05° gave the calcd. and found mol. fractions of HOAc in the gaseous state: 0.9836, 0.940, 0.937; 0.7513, 0.631, 0.602; 0.5501, 0.502, 0.485. In HOAc-H_2O solns. at 80.00°, some values were, resp., 0.8781, 0.7[illegible], 0.770; 0.5464, 0.458, 0.433; 0.2205, 0.179, 0.159; 0.0630, 0.0503, 0.0470. F. H. R.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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BC

L-1

Explosive oxidation of methane. N. Kosoarv, J. Kasarnovski, and L. Kargitanov (Acta Physicochim. U.R.S.S., 1935, 2, 857—878).—The yield of CO_2, H_2O, CO, and H_2 per cu.m. of CH_4 consumed in an equimol. mixture of CH_4 and O_2 is independent of pressure up to 3-70 atm. and is unaffected by the nature of the wall or the diameter of the vessel, although the amount of CH_4 oxidised is less in narrow vessels. The influence of additions of N_2, CO, CO_2, and H_2 is in agreement with thermodynamic requirements. The explosion temp. calc. from the water-gas equilibrium data agrees closely with that calc. from sp. heat data, and it is inferred that equilibrium is attained in the explosion. If H_2O is present initially CH_2O and EtOH are formed and equilibrium is not attained. The reaction forms a suitable source of H_2 for the NH_3 synthesis.

R. S.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

Calculation of dipole moments. I. R. Krichevskii and Ya. S. Ka[illegible]rnovskii. *J. Phys. Chem.* (U. S. S. R.) 6, 839-41(193[illegible]).—Theoretical and review. Various equations are discussed with examples of exptl. data from the literature. An equation applying the methods of dil. solns. is derived and found in many cases to be more satisfactory than that of Debye. F. H. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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PROCESSES AND PROPERTIES INDEX

Thermodynamics of the equilibrium gas-gas solution in liquid. I. R. Krichevskii and Ya. S. Kazarnovskii. *J. Phys. Chem.* (U. S. S. R.) 6, 1320-4 (1935).—The equation $\ln (f_2/N_2) = \ln k + (V_2P/2.303RT)$ fits the known exptl. data on the soly. of H_2 and N_2 mixts. in water from 0 to 100° up to 1000 atm. pressure very satisfactorily. **Calculation of the composition of the vapor phase over the three-component systems.** *Ibid.* 1325-9.—Data are given for the systems H_2O-EtOH with benzyl alc., p-toluidine, phenylacetic acid, acetanilide, phenylethyl alc., amyl benzoate and salicylic acid. **Partial molar values in infinitely dilute solutions.** *Ibid.* 1330-2. Theoretical. H_2O-EtOH is given as an example. F. H. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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18

Obtaining hydrogen and hydrogen-nitrogen mixtures by the explosive oxidation of methane. N. I. Kobozev, Ya. S. Kazarnovskii and L. I. Kashtanov. *J. Chem. Ind. (Moscow)* 12, 1030-6(1935).—The explosion of equimol. amts. of CH_4 and O_2 gives a yield of 37.8% CO and 49.4% H_2, independent of pressure from 0.72 to 3.7 atm. The walls of the reaction vessel had no effect, but reduction of the diam. of the vessel hinders the reaction without changing the final products. Addn. of N_2 to the mixt. lowers the yield of CO and H_2 somewhat, but this effect can be counteracted by the presence of CO_2. Addn. of H_2O to the mixt. causes incomplete reaction. Calcns. show that the temp. conditions of the reaction probably det. purely thermodynamically the direction of the explosion. H. M. Leicester

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

A-1

Solubility in ternary systems. J. S. Kazan-Novski (J. Phys. Chem. Russ., 1937, 9, 25—31).—The solubility of a non-volatile component in a mixture of two volatile solvents has been calc. for the system $NaCl + H_2O + NH_3$. E. R.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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BC

A-1

Free energies of formation of sodium carbonate and hydrogen carbonate. I. R. Kritschevski and J. S. Kasarnovski (J. Phys. Chem. Russ., 1937, 9, [illegible]—[illegible]).—The free energy of formation (ΔF) of Na_2CO_3 is calc. (*a*) from the sum of changes in F corresponding with eight partial reactions, and (*b*) from the third law of thermodynamics. The vals. obtained are $\Delta F_{[illegible]}$ = [illegible] kg.-cal. (*a*) and 251·8 kg.-cal. (*b*). The corresponding vals. for $NaHCO_3$ are 203·2 and 204·3 kg.-cal. For the reaction $2NaHCO_3 \rightarrow Na_2CO_3 + H_2O + CO_{2\,gas}$ $\Delta' F_{373\cdot1}$ = 2·0 kg.-cal. (calc.), compared with 2·5 kg.-cal. (exp.).

E. R.

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CA

2

The calculation of solubility in ternary systems. Ya. S. Kazarnovskii. *J. Phys. Chem.* (U. S. S. R.) 10, 25-31 (1937).—For ternary systems composed of 2 volatile and 1 nonvolatile component the equation $n_1\partial\ln p_1/\partial n_1 + n_2\partial\ln p_2/\partial n_1 + n_3\partial\ln a/\partial n_1 = 0$ is prepared for calcg. the soly. of the nonvolatile phase. With Avdeeva's data (C. A. 34, 4122) there is good agreement between exptl. and calcd. values. F. H. Rathmann

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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CA

2

An equation of state for gaseous mixtures. I. R. Krichevskii and Ya. S. Kazarnovskii. *Acta Physicochim. U. R. S. S.* 10, 217–44(1939)(in English).—Data on the *P-V-T* relations for various A-C_2H_4, O_2-C_2H_4, air, N_2-CH_4, N_2-$3H_2$, pure H_2 and H_2-CO mixts. at 0 to 300° and at pressures up to 1000 atm. are given. In the equation $p = p_1^0 N_1 + p_2^0 N_2 + a N_1 N_2 (p_1^0 - p_2^0)$, a has the values 0.474 for A-C_2H_4 at 25° up to 125 atm.; 0.223 for N_2-O_2 (air) from 0 to 200° and up to 2700 atm.; 0.520 for O_2-C_2H_4 at 25° up to 125 atm.; 0.464 for N_2-CH_4 from 0 to 200° and up to 25 atm.; 0.519 for N_2-H_2 at 0° up to 1000 atm., and 0.465 at 300°; 0.741 for H_2-CO at 0–25° and up to 600 atm. The data also obey the fugacity equation $RT \ln (f_1/f_1^0 N_1) = N_2^2 a RT \ln (f_1^0/f_2^0) + N_2 (1 + a(N_2 - N_1))(p_1^0 - p_2^0)v$, where f_1 and f_2 are the fugacities and N_1 and N_2 the mole fractions to within a max. error of ca. 6% and a mean square error of ca. 1%.

F. H. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

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Ca KAZARNOVSKIY YA. S. B-1

Equation of state for gas mixtures. I. R. Kritschevski and J. S. Kazarnovski (J. Phys. Chem. Russ., 1939, 13, 378—396).—A semi-empirical equation for the total pressure, p, of a binary gas mixture is proposed: $p = p_1^0 N_1 + p_2^0 N_2 + aN_1N_2(p_1^0 - p_2^0)$, where p_1^0 and p_2^0 are the pressures of the components for a vol. equal to the mol. vol. of the mixture, N_1 and N_2 the mol. fractions of the components, and a is a const. which can be a function only of the temp. (cf. A., 1938, I, 611). It agrees with existing data for a wide range of temp., pressure, fugacity, and composition. R. C.

State Inst. of Nitrogen Industry. Moscow

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CA

2

Compressibility of ammonia at high temperatures and pressures. Ya. S. Kazarnovskii. *Acta Physicochim. U. R. S. S.* 12, 813-22(1940).—P-V values are given for 25° intervals from 200° to 300° and for pressures 100-1000 atm. The values are correct to 0.5%. H. C. P. A.

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C4

2

Equation of state for gas mixtures. Ya. S. Kazarnovskii. *Acta Physicochim. U. R. S. S.* 13, 853-73(1940)(in German); cf. *C. A.* 33, 6106[a].—The equation of state for binary gas mixts. $p = p_1^0 N_1 + p_2^0 N_2 + a N_1 N_2 (p_1^0 - p_2^0)$ was developed. The components of the mixt. are dipoles with rectilinear isometrics, and the coeff. a is a temp. function. The dependence of the function a on temp. was shown experimentally with the binary gas mixts. NH_3-H_2 and NH_3-N_2. The equation gave satisfactory results for the compressibility of the gas mixts. over a wide range of temp. and pressure. For ternary gas mixts. $p = p_1^0 N_1 + p_2^0 N_2 + p_3^0 N_3 + a_{12} N_1 N_2 (p_1^0 - p_2^0) + a_{13} N_1 N_3 (p_1^0 - p_3^0) + a_{23} N_2 N_3 (p_2^0 - p_3^0)$ reproduced the exptl. data for the compressibility of mixts. of N_2-H_2-NH_3. The binary-gas-mixt. equation was successfully applied to the exptl. data for binary solns. of H_2 and N_2 in liquid NH_3.

W. George Parks

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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2

Compressibility of nitrogen-hydrogen-ammonia mixtures at high pressures and temperatures. Ya. S. Kazarnovskii, G. B. Simonov and G. E. Aristov. *J. Phys. Chem.* (U. S. S. R.) 14, 774-81(1940); cf. C. A. 34, 2458[6].—The compressibility of two H_2-NH_3, one N_2-NH_3 and three H_2-N_2-NH_3 mixts. was measured at 150°, 200°, 250° and 300°, up to 1640 atm. By use of these values and the Beattie-Bridgman equation, the mol. vols. were calcd. with a possible error of 1%. B. C. P. A.

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

BC

Equation of state for gas mixtures. I. S. Kasarnovski (J. Phys. Chem. Russ., 1940, 14, 1046—1052).—If all the pressures are given for the same mol. vol., the pressure of a mixture $p = p_1N_1 + p_2N_2 + aN_1N_2(p_1 - p_2)$, p_1 and N_1 being the pressure and mol. fraction of the first component, and a a const. In non-polar gas mixtures a is independent of temp.; in polar mixtures it depends on temp. but is independent of N_1. The equation can also be applied to mixtures of a gas and a saturated vapour, e.g., to p of H_2 and NH_3 over liquid NH_3. An analogous equation is valid for ternary mixtures. J. J. B.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CB

2

Effect of pressure on the heat of formation of ammonia. Ya. S. Kazarnovskii and M. Kh. Kharapet'yants. *J. Phys. Chem.* (U. S. S. R.) 15, 966-73(1941); cf. C. A. 35, 6494[8]. —The relation found by Gillespie and Beattie (C. A. 25, 242, 4172) using the Beattie-Bridgeman equation, for the heat of formation of NH_3 as a function of the pressure is incorrect. The equation for the heat capacity and compressibilities are not applicable. The calcns. of Kowalczyk (C. A. 28, 7135[6]) are similarly incorrect because the values obtained for the compressibilities by use of the van der Waals equation differ from exptl. values by as much as 50 to 100%. The effect of pressure on the heat of the reaction $\frac{1}{2}N_2 + \frac{3}{2}H_2 = NH_3$ (all gases) at temps. from 250 to 500° and pressures up to 7000 atm. can, however, be calcd. by means of the equation: $\Delta H_p = \Delta H_{p=1} + \int_1^p \Delta v dp - T\int_1^p (\partial \Delta v/\partial T)_p dp$ and assuming that exptl. values for the compressibility of NH_3 up to 300° can be extrapolated to 500°. At high temps. and pressures the heat effect is about 20% greater than at atm. pressure. The heats of mixing of H N to form the three-component system H N NH_3 are calcd. by use of the Krichevskii-Khazanova equation (cf. preceding abstr.).

P. H. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

2

Thermodynamic properties of compressed ammonia. Ya. S. Kazarnovskii and M. Kh. Karapet'yants. *J. Phys. Chem.* (U.S.S.R.) 17, 172-86(1943); cf. *C.A.* 38, [illegible].—Fugacity, heat capacities, entropy, internal energy, free energy, etc., of NH_3 are calcd. from literature data for 150-300° and 20-1000 atm. B. A.

Moscow State Nitrogen Inst.

Order Lenin Chemico-Technological Inst. im. Mendeleyev

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

PROCESSES AND PROPERTIES INDEX

2

Equation of state for gas mixtures. Ya. S. Kazarnovskii. *J. Phys. Chem.* (U.S.S.R.) 18, 364-70(1944).—Math.-theoretical. On the basis of equations of state for gases as developed by K. and Krichevskii (*C.A.* 33, 6104[4]), equations are derived for calcns. of internal energy, heat capacity, entropy, free energy, C_v, C_p, and differential throttle effect for binary and ternary gas mixts. Equations are also drawn for calcns. of partial molar quantities in these mixts. Thermal data on N-H mixts. correspond well to the calcd. amts. G. M. Kosolapoff

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1345. COMPRESSIBILITY OF METHANE AND METHANE-AMMONIA MIXTURES AT HIGH TEMPERATURES AND PRESSURES. Kazarnovskii, Y. S. and Levchenko, G. I. (J. Phys. Chem. (U.S.S.R.) 1944, 18, 380-2: U.O.P. Res. Lab. Abstr. 13 Feb. 1946, 21, 28) The compressibility of methane under pressures of 86.6 to 1400 atm. was determined at 250 and 300° C. The data at 200°C. agree well with those observed at low pressures by Kvalnes and Gaddy, while some discrepancies were observed at 250 and 300° C. For determination of the compressibility of methane-ammonia mixtures the method of Michels was used. The binary mixtures contained respectively 32.84, 39.58, 53.85 and 55.72 per cent ammonia. The pressures used ranged from 82 to 1675 atm. and the temperatures from 150 to 300°C. The isometric graphs of the binary mixtures are straight lines within a wide interval of temperatures and pressures, which allows reliable extrapolation of these data to higher temperatures. The data obtained are quite satisfactorily represented by the equation of state for binary gaseous mixtures derived by Krichevskii and Kazarnovskii.

METALLURGICAL LITERATURE CLASSIFICATION

[redacted]

KAZARNOVSKIYI, YA. S.

KRICHEVSKIYI, I. R., KAZARNOVSKIYI, YA. S., and
LEVCHENKO, G. T. (Nitrogen Inst. Moscow)
J. Phys. Chem. (USSR) 19, 314-22 (1945)
Thermodynamic properties of compressed nitrogen-hydrogen mixtures.

[redacted]

PROCESSES AND PROPERTIES INDEX

Thermodynamic properties of nitrogen hydrogen ammonia mixtures. Ya. N. Kazarnovskii (State Inst. Nitrogen Industry). *J. Phys. Chem.* (U.S.S.R.) 19, 392-404(1945).—For the mixt. NH_3 17.0, N_2 30.0, H_2 51.8%, the values of $d \log p/d \log T$, free energy, max. work, heat content, internal energy, and the two heat capacities are calcd. for the temp. range 150-300° between 50 and 1000 atm. From the heat-content data for the mixt. and its constituents the heat of mixing of NH_3 with $N_2 + 3 H_2$ is calcd. If the heat of mixing is taken into account, the effect of pressure on the heat of NH_3 synthesis appears almost eliminated; the heat of reaction at 500° and 1000 atm. is only 5.4% higher than at the atm. pressure.

J. J. Bikerman

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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B

26

Compressibility of Gases at High Pressures and Low Temperatures. (In Russian.) Ya. S. Kazarnovskii and I. P. Sidorov. *Zhurnal Fizicheskoi Khimii* (Journal of Physical Chemistry), v. 21, Nov. 1947, p. 1363 1370.

Gives details of new and accurate method for determination of the above. Includes diagrams of apparatus. Compressibilities of hydrogen between 200 and 1805 atm. and between 0° and —84.0°C. were determined with an accuracy of 0.3 0.5%. 11 ref.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KAZARNOVSKIY, Ya.S., kand.khim.nauk; SIDOROV, I.P., kand.tekhn.nauk;
KAZARNOVSKAYA, D.B., kand.khim.nauk

Equilibrium of homogeneous gas reactions at high pressure.
Trudy GIAP no.7:21-25 '57. (MIRA 12:9)
(Phase rule and equilibrium) (Gases)

KOBOZEV, N.I., doktor khim.nauk; KAZARNOVSKIY, Ya.S., kand.khim.nauk;
MENDELEVICH, I.I., kand.~~tekhn.nauk~~

Explosive conversion of methane. Part 1. Trudy GIAP no.7:
155-166 '57. (MIRA 12:9)
(Methane) (Oxidation)

KAZARNOVSKIY, Ya.S., kand. khim. nauk; DEREVYANKO, I.G.; STEZHINSKIY, A.I.
[redacted] N.I., doktor khim. nauk

Explosive conversion of methane. Part 2. Trudy GIAP no.8:89-105 '57. (MIRA 12:9)

(Methane) (Gas and oil engines) (Fuel--Testing)

KAZARNOVSKIY, Ya.S., kand.khim.nauk; KOBOZEV, N.I., doktor khim.nauk; STRZHINSKIY, A.I.; TORBAN, B.S.

Explosive conversion of methane. Part 3. Trudy GIAP no.8:106-123 '57. (MIRA 12:9)

(Methane) (Gas and oil engines) (Fuel--Testing)

KAZARNOVSKIY, Ya.S.; KARKHOV, N.V.

High-temperature conversion of gaseous hydrocarbons. Biul. tekhn.-ekon. inform. no.8:12-14 '58. (MIRA 11:10)
(Hydrocarbons)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000721330005-0"

KAZARNOVSKIY, Ya.S.; [illegible], P.P.; [illegible]; SOLNTSEVA, L.N.

Oxidative thermal pyrolysis of hydrocarbon gases to acetylene. Khim. prom. no. 7:547-551 O-N '60. (MIRA 13:12)
(Hydrocarbons) (Acetylene)

SEMENOV, V.P.; KAZARNOVSKIY, Ya.S.

High temperature conversion of individual hydrocarbons and their mixtures. Gaz.prom. 5 no.3:33-40 Mr '60. (MIRA 13:6)

(Gases--Analysis) (Hydrocarbons)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000721330005-0"

KAZARNOVSKIY, Ya.S.; SEMENOV, V.P.

High-temperature conversion of hydrocarbons. Gaz.prom.
5 no.7:41-50 '60. (MIRA 13:7)
(Hydrocarbons) (Oxidation)

S/064/61/000/001/002/011
B110/B215

AUTHORS: ~~Kazarnovskiy, Ya. S.~~, Semenov, V. P., Ovcharenko, B. G., Tsypin, A. N., Kolodeyev, I. P., Litvinchuk, V. A.

TITLE: Problems of apparatus design for the thermooxidative pyrolysis of hydrocarbon gases

PERIODICAL: Khimicheskaya promyshlennost', no. 1, 1961, 11-15

TEXT: The pyrolysis of hydrocarbon gases for the production of C_2H_2 and synthesis gas takes place at 1450-1500°C. Since the intermediate C_2H_2 must not remain in the reaction zone for more than 0.003-0.01 sec, short tongues of flame must be used. As the traditional apparatus by Sachse and Bartholomé with maximum production of C_2H_2 of 3500-5000 tons per year is no longer sufficient, a new more efficient apparatus has to be designed. Highly turbulent combustion increases the rate of flame propagation and shortens the tongue considerably. The method of methane pyrolysis applied by B.S.Grinenko yielded high C_2H_2 concentrations. Its industrial application, however, is

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B110/B215

rendered difficult due to the almost critical velocity of the gas of 200-250 m/sec required for it, due to the high initial temperature (700-800°C) of the oxygen necessary for the combustion stabilization (7% of the total amount), and due to an increase in temperature of the reaction channel of up to 2000°C. A pilot plant for average gas velocities and efficiencies of approximately 160 Nm^3/hr is described. The conical ring nozzle of the burner contained whirl blades. The CH_4/O_2 mixture flowed into the reaction channel at 400°C and approximately 150 m/sec. The oxygen used for stabilization was only 5% of the total O_2 content. Maximum temperature in the reaction zone was 1450°C; gas velocity: approximately 100 m/sec; its stay: 0.0025 sec. The acetylene yield was 8 to 8.4% of the reaction gases plus deposition of carbon black: 3 to 3.5 g/Nm^3 of the initial mixture; ratio O_2 consumption = 0.62 to 0.64. According to the author, transition from pilot stage to industrial stage would be most suitable by increasing the number of burners. Fig. 1 shows the pilot plant of 1958. Coke oven gas of the ammonia unit compressed up to 0.36 atm by compressor (4), is purified in cloth filter (5),

and conveyed to the preheating oven (3). Industrial oxygen compressed up to 0.38 atm by a ЧК -3 (ChK-3) compressor 1 is also conducted into the preheating oven via water separator (2) and filter (5). There, O_2 is heated to 350°C, and the coke oven gas to 450°C. From mixer (6), the mixture is at a temperature of 300°C conducted into burner (7) and reaction vessel (8) from which the pyrolysis gases flow out at 80-90°C. After leaving scrubber (13) where the latter were purified from carbon black, they pass the water separator and filter before they are used for the production of acetylene. The triple burner of Fig. 3 which is used by the authors, has four spirals for producing whirls. Stabilizing O_2 is conducted through their axles. The following parameters have to be observed exactly to attain an optimum course of reaction: consumption of O_2 and hydrocarbon gas, temperature of preheating, ratios $[O_2] : [\Sigma C_1]^2$ in the initial mixture, and amounts of water. The following control and regulation apparatus were used: ДПМ -270 (DPM-270), ДП-410 (DP-410), ДП-280 (DP-280), МСШ -Пр -54 (MSSh-Pr-54), ЭПП -09 (EPP-09), and 2РЛ:24В (2RL:24V) on АУС (AUS) blocks. The following average composition

of the initial gas was determined: C_2H_4 = 3%, O_2 = 0.8%; CO = 13.8%; H_2 = 6.7%; CH_4 = 62%; N_2 = 13.7%. For stabilizing the flame, 3% of the total oxygen (79 to 98% of O_2) was required. The temperature of the reaction channel was approximatly 1350°C, that of the reactor block 100°C. The total time of reaction was 5000 hr, ratios $[O_2] : [CH_4+2C_2H_4]$ = 0.62 to 0.72. Optimum yield of C_2H_2 = 7.3%, its average = 6.9%; total cracking = approximately 30%, effective cracking approximately 30%. The adiabatic temperatures of the reaction were lower than that of the hydrogen formation according to $CO + H_2O = CO_2 + H_2$. The temperature of preheating (500°C) probably causes a reduction in O_2 consumption by 10%. The method is suited for supplementing the production of nitrogen fertilizers for which hydrogen is obtained from coke oven gases. A percentage of approximately 4 t of NH_3 per t of C_2H_2 was obtained. There are 3 figures, 2 tables, and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc.

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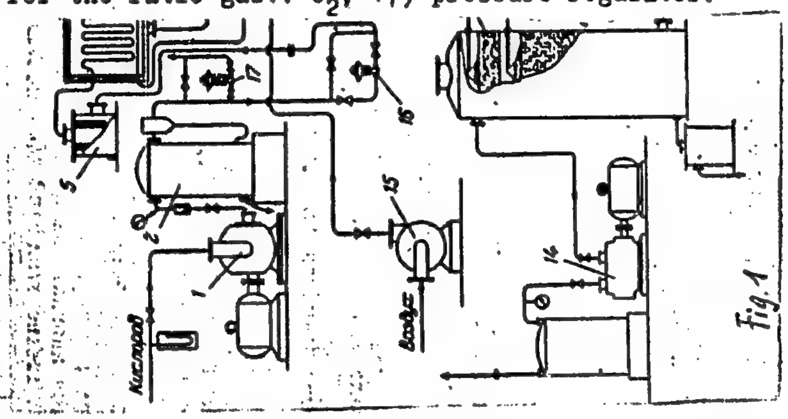
Legend to Fig. 1: basic diagram of a semi-industrial plant for the thermo-oxidative pyrolysis of hydrocarbon gases, 1) compressor ХК-3 (KhK-3); 2) receiver-water separator, 3) oven for preheating gas 4) compressor РУТТ (RUTT), 5) cloth filter, 6) mixer, 7) burner, 8) reaction vessel, 9) carbon black separator, 10) water seal, 11) bunker for carbon black (coke), 12) centrifugal pump, 13) scrubber, 14) gas pum РМК-4 (RMK-4), 15) air pump, 16) regulator for the ratio gas:: O_2, 17) pressure regulator.



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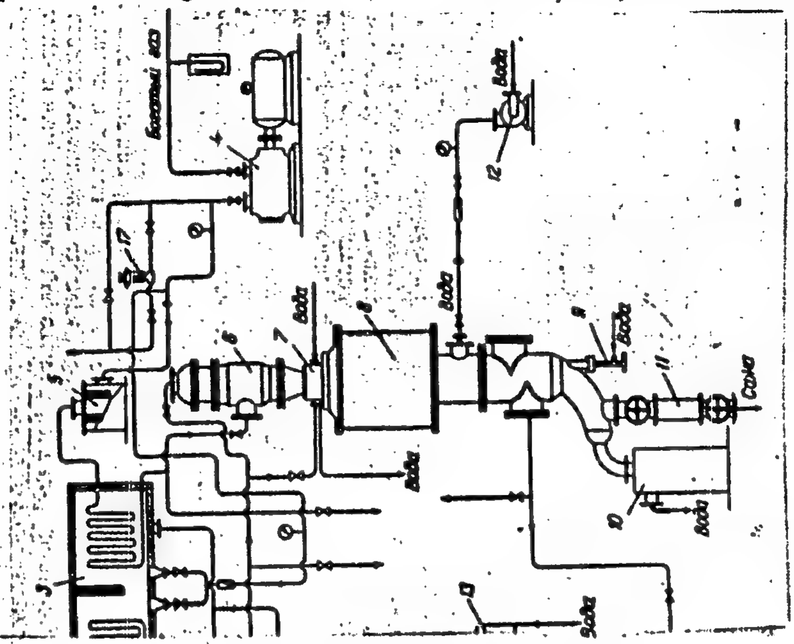
B110/B215



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B110/B215

Problems of apparatus design for...

Legend to Fig. 3: tripl̶el burner, 1) socket, 2) whirl spiral, 3) bottom of burner, 4) shell, 5) partition, 6) burner housing, 7) tube for stabilization oxygen, a) water.

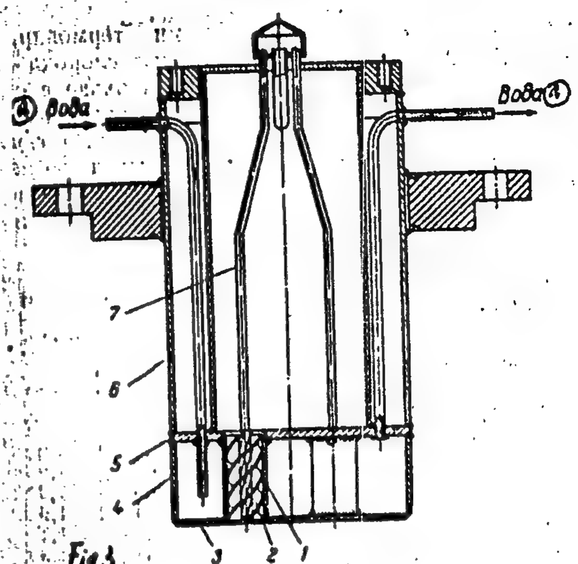

Fig.3

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SEMENOV, V.P.; KAZARNOVSKIY, Ya. S.; KOLODEYEV, I.P.; LITVINCHUK, V.A.

Processing of heavy petroleum residues into synthesis gas. Gaz. prom. 6 no.2:41-48 '61. (MIRA 14:4)

(Gas manufacture and works)

S/081/61/000/020/083/089
B110/B147

AUTHORS: Semenov, V. P., Kazarnovskiy, Ya. S., Kolodeyev, I. P., Litvinchuk, V. A.

TITLE: Conversion of heavy petroleum residues into synthesis gas

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 20, 1961, 405-406, abstract 20M103 (Gaz. prom-st', no. 2, 1961, 41-48)

TEXT: Experiments on the conversion of mazout into synthesis gas were conducted on an experimental plant (diagram given) for conversion at high temperature. The efficiency of the plant was 6.6-7.9 kg of mazout per hr. The average ratio of the linear velocities of mazout escape from the nozzle and of the vapor-oxygen mixture was ~200, the volume of the reaction space was 0.006 m^3, the temperature in the reaction zone was 1350-1450°C, and the linear velocity of converted gas in the reaction zone was 6-9 m/sec. Experimental and calculated equilibrium compositions of the reaction mixture, and comparative tables of efficiency with respect to carbon or oxygen, calculated from equations and obtained from the values of material equilibrium, are presented. It is concluded that

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S/081/61/000/020/083/089
Conversion of heavy petroleum... B110/B147

the equations indicated for the techniques of commercial gas production from carbon raw material have a universal character. [Abstracter's note: Complete translation.]

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000721330005-0"

KAZARNOVSKIY, Ya.S.; OVCHARENKO, B.G.; SEMENOV, V.P.; DEREVYANKO, I.G.

Process gas obtained by the high temperature conversion of hydrocarbon gases. Gaz.prom. 7 no.1:43-50 '62. (MIRA 15:1)
(Gas, Natural) (Gas manufacture and works)

KAZARNOVSKIY, Ya.S.; KARKHOV, N.V.; KABANOV, F.I.; OVCHARENKO, B.G.

Production of synthesis gas by high temperature conversion of hydrocarbon gases at high pressure. Khim.prom. no.6:396-404 Je '62. (MIRA 15:11)

(Hydrocarbons) (Water gas)

KABANOV, F.I.; KARKHOV, N.V.; KAZARNOVSKIY, Ya.S.; OVCHARENKO, B.G.;
Prinimal uchastiye: ZUYEV, V.I.

Production of process gas by the high temperature conversion of natural gas at elevated pressure. Khim.prom. no.9:547-555 Ag '62. (MIRA 15:9)

(Gas, Natural)
(Gas manufacture and works)

~~KAZARNOVSKIY, Ye.S.;~~ KAZARNOVSKAYA, D.B.; SIDOROV, I.P.

Equilibrium of homogeneous gas mixture reactions at high pressure. Khim.prom. no.10:747-750 O '62. (MIRA 15:12)
(Gases)
(Chemical equilibrium)

KAZARNOVSKAYA, D. B.; SIDOROV, I. P.; KAZARNOVSKIY, Ya. S.

Determination of the compressibility of methanol, carbon monoxide-hydrogen and carbon monoxide-hydrogen-methanol mixtures at high temperatures and pressures. Khim. prom. no.3:205-211 Mr '63. (MIRA 16:4)

(Methanol) (Carbon monoxide) (Hydrogen)
(Compressibility)

KAZARNOVSKIY, Ya.S.; KAZARNOVSKAYA, D.B.; SIDOROV, I.P.

Equilibrium of the reaction of methanol synthesis from carbon monoxide and hydrogen at high pressure. Khim. prom. no.6: 426-433 Je '63. (MIRA 16:8)

(Methanol) (Carbon monoxide) (Hydrogen)

MIKHAYLOVA, S.A.; KAZARNOVSKIY, Ya.S.; KAZANOVSKAYA, D.B.

Thermodynamic properties of gaseous methanol at high temperatures and pressures. Khim. prom. no.4:244-249 Ap '63. (MIRA 16:8)

KAZARNOVSKIY, Ya. S.; MIKHAYLOVA, S. A.; KAZARNOVSKAYA, D. B.

Influence of pressure on the thermal effect of the synthesis of methanol from carbon oxide and hydrogen. Khim prom no. 3: 183-187 Mr '64. (MIRA 17:5)

ALEYNOV, D.P.; KAZARNOVSKIY, Ya.S.

Production of acetylene by the thermal oxidative pyrolysis of hydrocarbon gases at elevated pressure. Khim. prom. no.5:332-339 My '64. (MIRA 17:9)

ALEYNOV, D.P.; KAZARNOVSKIY, Ya.S.

Effect of pressure on the mechanism of the formation and decomposition of acetylene in the thermo-oxidative pyrolysis of methane. Khim. prom. no.6:422-425 Je '64. (MIRA 18:7)

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L 41157-65
ACCESSION NR: AP5007155

SUBMITTED: [illegible] ENCL: 00 SUB CODE: EE

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L 40702-65 EPA/EPF(c)/EPR/EPA(s)-2/EWP(j)/EWA(c)/EWT(m) Pc-4/Pr-4
RM/WW/JW

ACCESSION NR. AP5010546

UR/0064/65/000/004/0001/0006

AUTHOR: Aleynova, L. N.; Aleynov, D. P.; Kazarnovskiy, Ya. S.; Kornilov, P. P.

TITLE Intermediate stages of partial combustion of methane with oxygen

SOURCE: Khimicheskaya promyshlennost', no. 4, 1965, 1-6

TOPIC TAGS: methane, combustion, kinetics, pyrolysis, combustion mechanism, partial combustion, acetylene

ABSTRACT: Partial methane combustion by thermooxidative pyrolysis is the basic process in the production of synthesis gas or acetylene from natural gas. The kinetics of partial methane oxidation at lower temperatures have been ... extensively by Semenov and coworkers. However, the mechanism proposed ... studies holds only at temperatures below 1000C and cannot be applied to high temperature processes. Experiments were made with oxygen and natural gas in a flow reactor to determine the concentration of intermediates and reaction products (CO_2, acetylene, ethylene, ethane, propane, O_2, CO, H_2) as a function of methane conversion. Runs were made at initial gas temperatures of 25C and 450C and pressures of 1 and 4 atm. The general trend in the accumulation of intermediates was identical in both experiments. The results indicate that partial oxidation at high temperatures takes place in three stages: 1) methane oxidation, during which oxygen is

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ACCESSION NR: AP5010546

used for conversion to CO, H_2, H_2O, and CO_2 while the acetylene accumulation remains low (0—0.65 conversion); 2) acetylene accumulation, during which the [illegible] concentrations remain constant [illegible]—0.9 conversion), and [illegible] characterized by conversion to CO and H_2, cracking of acetylene, [illegible]

[illegible] The thermal [illegible]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: FP

NO REF SOV: 015 OTHER: 014 ATD PRESS: 3231

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[illegible], [illegible]; [illegible], [illegible]; [illegible], [illegible]; [illegible], [illegible]

Intermediate stages of the incomplete [illegible] of [illegible] in oxygen. Khim.prom. 41 no.4:1-6 Ap '65.

(MIRA 18:8)

KARANOV, F.I., KAGARNOVSKIY, Ya. [illegible], KA[illegible], [illegible], [illegible] V.[illegible]

Production of technological gas by means of high temperature vapor-oxygen conversion of petroleum fuels under increased pressure. Khim. prom. 41 no.8:[illegible] Ag '65.

(MIRA 18:9)

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

B

20

Fundamental Characteristics of a Large Pulverized Coal Steam Generator (Type KO-III—200) During Operation on Blast Furnace Gas. (In Russian.) E. M. Kazarnovskii. *Boiler and Turbine Construction* (U.S.S.R.), Feb. 1947, p. 13-18.

Performance data on the use of blast-furnace gas and of mixtures of blast-furnace and coke-oven gas are tabulated. Includes detailed diagrams of the equipment.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KAZARNOVSKIY, Ye.M.

"Regulating the Temperature of Superheated Steam". Gosenergoizdat, Leningrad/Moscow, 1949, 11 pp, 6 rubles.

SO: W-14151 11 Oct 1950.

KAZARNOVSKIY, YE. M.

Regulirovanie temperatury peregretogo para v moshchnykh parovykh kotlakh. Leningrad, Gosenergoizdat, 1949. 111, (1) p. illus., tables.

Bibliography: p. (112)

Control of superheated steam temperature in heavy-duty steam boilers.

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953

[illegible], Y. [illegible]

[illegible] sechehnykh [illegible] [[illegible] heavy-duty [illegible]]. Izd. 2-e. [illegible]

SO: Monthly List of [illegible] Accessions, Vol 7, No [illegible], June 19[illegible].

KAZARNOVSKIY, Ye. M.

KAZARNOVSKIY, Ye.M.; BAESHTEYN, I.K.; redaktor; ZABRODINA, A.A., tekhnicheskiy redaktor.

[Regulation of superheated steam in high pressure steam boilers] Regulirovanie temperatury peregretogo para v moshchnykh parovykh kotlakh. Izd. 2., perer. i dop. Moskva, Gos. energ. izd-vo, 1954. 153 p. (MLRA 7:8)

(Steam boilers) (Steam, Superheated)

KAZARNOVSKIY, Ye.M., kand.tekhn.nauk

Control of superheating in TP-170 boilers by means of gas. Energomashinostroenie 5 no.3:7-12 Mr '59. (MIRA 12:3)
(Boilers)

KAZARNOVSKIY, Yefim Meyerovich, kand.tekhn.nauk; MASLOV, V.I., red.; SATSEVICH, I.Ye., red.izd-va; MIKHAYLOVA, V.V., tekhn.red.

[Temperature regulation of superheated steam in large industrial steam boilers] Regulirovanie temperatury peregretogo para v moshchnykh parovykh kotlakh. Izd.3., dop. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 183 p. (MIRA 14:2)

(Boilers) (Steam, Superheated)

KAZARNOVSKIY, Ye.M., kand. tekhn. nauk; VOROTYNTSEV, P.P., inzh.

Improvement of the coal grinding operation of a redesigned high-speed hammer mill with air flow separators. Energomashinostroenie 9 no.3:30-33 Mr'63. (MIRA 17:5)

KAZARNOVSKIY, Ye.M., kand.tekhnnauk; NESTEROV, B.R., inzh.

Testing of TP-170 boiler units with hammer mills and air-flow separators. Elek. sta. 35 no. 4:2-6 Ap '64. (MIRA 17:7)

KAZARNOVSKIY, Ye.M., kand. tekhn. nauk; BURGVITS, G.A., inzh.; DIANOV, I.M., inzh.; VOROTYNTSEV P.P.

Results of the study of the performance of hammer mills with air blast separators in coal crushing operation. Energomashinostroenie 10 no.11:39-43 N '64 (MIRA 18:2)

KAZARNOVSKIY, Yu. E.

26367 Gidrologicheskoy esnove vodnoznergeticheskogo rascheta malykh sel'skokhozyay-stvennyth. Gzs. Gidrotekhnika i melioratsiya, 1949, No. 2, s. 40-44.

SO: LETOPIS' NO. 35, 1949

KAZARNOVSKIY, YU. E. PA 197T61

USSR/Hydrology - Irrigation Nov 51

"Some Problems of Planning and Structure of Ponds and Reservoirs," Yu. E. Kazarnovskiy, Cand Tech Sci, Ye. L. Pavlov, Engr

"Gidrotekh i Meliorat" Vol III, No 11, pp 3-11

Soviet kolkhoz workers are accomplishing Stalin's plan for improvement of nature. In the 4 chernozem oblasts of Kursk, Voronezh, Orlov and Tambov alone more than 3,000 ponds and reservoirs have been constructed. Nevertheless, planning and designing of these projects have many defects which further experience and professional knowledge are expected to improve.

197T61

KAZARNOSKIY, YU. E.

Spillways

Remarks on the article "Determination of the volume of discharge over spillway dams of ponds." I. A. Zheleznyak. Gidr. i mel. 4 No. 3, 1952.

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Delitsyn, Iu. E.

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1. YU E. KAZARNOVSKIY

2. USSR (600)

4. E. V. Boldakov

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9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

KAZARNOVSKIY, Yu.E.

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Effect of reduction of flood crest is more significant in a reservoir with automatic release than with overflow spillway. A simple flood-routing procedure is explained.

B. Kolupaila, USA

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000721330005-0"

KAZARNOVSKIY, Yuliy Emmanuilovich, kand.tekhn.nauk; ORLOVA, V.P., red.; PAVLOVA, M.M., tekhn.red.

[Ponds and reservoirs; planning, construction and use] Prudy i vodoemy; proektirovanie, stroitel'stvo, ekspluatatsiia. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1957. 199 p. (MIRA 10:12)
(Ponds) (Reservoirs)

KAZARNOVSKIY, Yuliy Emmanuilovich; ANDREYANOV, V.G., otv.red.; GROSMAN, R.V., red.; BRAYNINA, M.I., tekhn.red.; SERGEYEV, A.N., tekhn.red.

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(Ponds) (Hydraulic engineering--Tables, calculations, etc.)

KANTOROVICH, Boris Veniaminovich; KUZNETSOV, Nikolay Kuz'mich; Prinimali uchastiye: GRIBANOV, I.P.; KAZARNOVSKIY, Yu.E.; FLORINSKIY, M.M., retsenzent; FLEKSER, Ya.N., retsenzent; YELIZAVETSKAYA, G.V., red.; DEYEVA, V.M., tekhn. red.

[Hydraulics, water supply, and hydraulic power plants] Gidravlika vodosnabzhenie i gidrosilovye ustanovki. Moskva, Izd-vo sel'khoz. lit-ry, zhurnalov i plakatov, 1961. 550 p. (MIRA 15:1)
(Hydraulic engineering)

ROGOV, A.I.; KAZARNOVSKIY, Yu.L.

Organization of rhythmic work in foundries. Lit. proizv. no.8: 8-9 Ag '62. (MIRA 15:11)

(Foundries--Management)

KOZLOV, Nikolay Yakovlevich, inzh.; BOL'SHAKOV, Vitaliy Mikhaylovich, inzh.; KAZARNOVSKIY, Zinoviy Iosifovich, inzh.; BIRGER, A.I., inzh., nauchnyy red.; KRYUGER, Yu.V., red. izd-va,; SOLNTSEVA, L.M., tekhn. red.; EL'KINA, E.M., tekhn.red.

[Rolled partitions and facing panels; production and use] Prokatnye, peregorodochnye i oblitsovochnye paneli; proizvodstvo i primenenie. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1958. 110 p. (MIRA 11:12)

(Concrete slabs)

BUACHIDZE, V.N.; NATSVLISHVILI, G.A.; GVANTSELADZE, O.D.; KAZARO, I.L.

Role of ergometry, spirography, and electrocardiography in evaluating the functional state of the heart muscle in tyrotoxicosis. Soob. AN Gruz. SSR 39 no.1:225-230 Jl '65. (MIRA 18:10)

1. Institut eksperimental'noy i klinicheskoy khirurgii i gematologii AMN SSSR, Tbilisi. Submitted November 9, 1964.

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KAZAROSYAN, R.N., dotsent.

Certain considerations on R.I.Kalganovaia's article "Clinically narrow pelvis." Akush.i gin. no.1:78 Ja-F '54. (MLRA 7:6)
(Pelvis) (Kalganovaia, R.I.)

KAZAROSYAN, R.N., dotsent

Some data on roentgenometry of the female pelvis. Akush. i gin. 32 no.4:13-17 Jl-Ag '56. (MIRA 9:11)

1. Iz kafedry akusherstva i ginekologii (zav. - dotsent N.T.Rayevskaya) Tashkentskogo instituta usovershenstvovaniya vrachey
(PELVIMETRY
roentgeno-pelvimetry in women)

KAZAROV, A.

Technical and economic results of using secondary methods of oil recovery in the Azerbaijan petroleum industry. Trudy AzNII DN no.3: 274-288 '56. (MIRA 11:6)

(Azerbaijan--Secondary recovery of oil)

1. KAZAROV, A. P.

2. USSR (600)

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7. Best midwives of the Institute of Obstetrics and Gynecology of Armenia.
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KAZAROV, A.P.

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(MLRA 7:11)

1. Iz Nauchno-issledovatel'skogo instituta akusherstva i ginekologii imeni N.K.Krupskoy (dir. prof. P.A.Markaryan) Ministerstva zdravookhraneniya SSSR.

(BREAST,
pump, universal manual type)

MARKARYAN, P.A.; GAMBARYAN, L.S.; KAZAROV, A.P.; KARAGEZYAN, K.G.

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